How to / Trackmania / Manialink / Building a Maniapage

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Positioning and Alignment

In the Forever ManiaLinks, it is possible to place visual elements wherever you want. Because you'll need some basic knowledge about the positioning, I will explain the used methods in detail in this part.

The two types of positioning

With the new Forever manialinks you can choose out of two positioning types: The classic one known from TMU with size of 2.0*1.5 and the new menu positioning which has a maximum size of 128*96.

A short preview concerning both methods:

* **Classic positioning:**

X interval: -1.00 ... +1.00 – the bigger the more left!
Y interval: -0.75 ... +0.75 – the bigger the more top
Z interval: -0.50 ... +0.50 – the bigger the more in the background
Width interval: 0.0 ... 2.0
Height interval: 0.0 ... 1.5

* **Menu positioning:**

X interval: -64 ... +64 – the bigger the more right
Y interval: -48 ... +48 – the bigger the more top
Z interval: -32 ... +32 – the bigger the more in the foreground
Width interval: 0 ... 128
Height interval: 0 ... 96

The main difference between the two methods is the interval of the values. Also mind the X- and Z-axis are mirrored in the classic positioning!

For positioning you need these attributes:

* pos="X Y Z" and size="Width Height" for classic postioning
* posn="X Y Z" and sizen="Width Height" for menu postioning

For menu positioning you simply add a "n" to the attribute. The values are separate by a space and stand between the quotation marks. You should stick to one positioning possibilty to avoid confusion. For example if a quad is positioned with pos="0.5 0.5 0" and another with posn="32 32 0" you will lose overlook.

The values depend on the main element. That means if a element is in a frame the values are relative to the position of the frame. If the element is written between the <manialink> tags the point of origin is the middle of the screen.

The third dimension

Free positionable elements can overlap each other. Which is going to be overlaped by which one? For this you have the already mentioned Z value and the corresponding interval. These interval is only estimated so do not use it up to its end. Remember that big values are in the front in menu positiong but in the background in the classic positioning ;)

If two elements have the same Z value or if one element has an invalid (not in the valid interval) value the random will decide which element will be overlaped: Each acces to the ManiaLink can show another order! Therefore make sure to use clear and valid values.

As said, elements could be placed in a frame and a frame is an element itself. Each frame can have its own Z value. If an element is in a frame its Z value is the sum of its own Z value and the one of the frame, short: the sum of the single values is the new Z value.
A small example: You have a frame with the Z value 0.05. In that frame you have a quad with the Z value 0.2. The final Z value of the quad is 0.25, it overlaps all elements with a Z value bigger then 0.25.

Small example

Now it is time to show some code examples. The complete explanation will be found later, here all is about positioning.

Code
```
<quad pos="1 0.75 0" size="2 1.5" />
```

This quad orientates itself in the top left of the screen center (do not forget mirrored X axis) and has the size of the whole screen. It can be used as background for example.

The same is achived by this code:

Code
```
<quad posn="-64 48 0" sizen="128 96" />
```

Even this code creates a background started in the top left of the screen center but with the menu positioning.

Code
```
<quad sizen="20 20" />
```

The standart for pos(n) is "0 0 0", the middle of the screen or the positioning point of the frame, the element is in. This quad is near the middle of the screen. (Why not exactly is said in the next part.)

Code
```
<quad posn="20 20 0" />
```

If you leave out the size the standard values will be used. They are size="1 1" respectively sizen="64 64". You will get a square area with half the width of the screen.

Best is to use always pos(n) and size(n) so that the game has no chance for arbitrariness.

As a gimmick and to test the positioning I created a small script. With it you can test what changes if you change pos(n), size(n) and halign/valign on a quad.

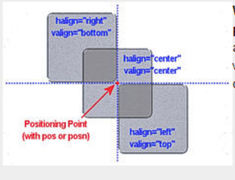
You can visit this script on the ManiaLink: Test Quad **(TMNF compatible)**

Effects of halign and valign

If you understand all (at least a bit) it is time to bring some confusion: The alignment of the elements.

Some would say: with halign (horizontal alignment) and valign (vertical alignment) the alignment of the content is meant, for example in a label where the text should be displayed.

But it is not like that. Both aligns affect the alignment of the element itself. To show what is meant a picture:



With halign/valign you define on which edge of the quad the positioning point is found, the point defined with pos(n). If we use bottom and left the positioning point is on the lower left edge of the quad. The standart values are halign="left" and valign="top". That means the positioning point is at default on the top left edge of the element.

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